Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): In ~~an~~ a nucleic acid expression assay, comprising (1) performing in vitro transcription of target nucleic acid template to generate cRNA, (2) contacting ~~a target nucleic acid~~ said cRNA with a probe immobilized on a microarray under conditions that allow hybridization between said ~~target nucleic acid~~ cRNA and said probe, and (3) detecting hybridized cRNA to assay expression of said target nucleic acid template, the improvement comprising providing said ~~target nucleic acid having~~ cRNA with at least one phosphorothioate moiety.

Claim 2 (currently amended): The method of claim 1, further comprising labeling said ~~target nucleic acid~~ cRNA by conjugating a reporter molecule to said phosphorothioate moiety.

Claim 3 (currently amended): The method of claim 2, wherein said labeling step comprises reacting said ~~target nucleic acid~~ cRNA with a conjugating moiety that

specifically reacts with said phosphorothioate moiety, followed by reaction with a labeling moiety that specifically reacts with said conjugating moiety.

Claim 4 (original): The method of claim 2, wherein said labeling step follows said contacting step.

Claim 5 (original): The method of claim 2, wherein said reporter molecule has an electrophilic moiety.

Claim 6 (original): The method of claim 3, wherein said conjugating moiety is an electrophilic moiety.

Claim 7 (original): The method of claim 5, wherein said electrophilic moiety is selected from the group consisting of a maleimide and an iodoacetamide.

Claim 8 (original): The method of claim 2, wherein said reporter molecule is selected from the group consisting of a fluorophore, a redox moiety, and an electrochemically active agent.

Claim 9 (original): The method of claim 2, wherein said reporter molecule is selected from the group consisting of TMR-maleimide, TMR-iodoacetamide and ALEXAFLUOR-maleimide.

Claim 10 (cancelled)

Claim 11 (currently amended): The method of claim ~~10~~ 1, wherein ~~target nucleic acid~~ said cRNA has at least three different thio ribonucleotides, said thio ribonucleotides being selected from the group consisting of an adenosine thiophosphate, a cytidine thiophosphate, a guanosine thiophosphate, a thymidine thiophosphate, and a uridine thiophosphate.

Claims 12–14 (cancelled)

Claim 15 (withdrawn): A method for detecting single nucleotide polymorphism, comprising extending a probe hybridized to a target by exactly one base by incorporating a compound selected from the group consisting of a dideoxynucleoside α-thio triphosphate and an acyclonucleoside α-thio triphosphate.

Claim 16 (withdrawn): The method of claim 15, further comprising labeling the extended probe by conjugating a reporter molecule to the thio moiety of said incorporated compound.

Claim 17 (withdrawn): The method of claim 16, wherein the reporter molecule is selected from the group consisting of TMR-maleimide, TMR-iodoacetamide, Alexafluor-maleimide, and bromo-bimane.

Claim 18 (withdrawn): The method of claim 15, wherein said dideoxynucleoside α-thiotriphosphate is at least one of the group consisting of dideoxyadenosine α-thiotriphosphate, dideoxycytidine α-thiotriphosphate, dideoxyguanosine α-thiotriphosphate, 3'-deoxythymidine α-thiotriphosphate, and dideoxyuridine α-thiotriphosphate.

Claim 19 (withdrawn): A polynucleotide, comprising at least one residue of the group consisting of an adenosine thiophosphate residue, a deoxyadenosine thiophosphate residue, a cytidine thiophosphate residue, a deoxycytidine thiophosphate residue, a guanosine thiophosphate residue, a deoxyguanosine thiophosphate residue, a thymidine thiophosphate residue, and an uridine thiophosphate residue, and at least one moiety bonded to said at least one residue, said moiety selected from the group consisting of a maleimide and an iodoacetamide.

Claim 20 (withdrawn): The polynucleotide of claim 19, wherein said moiety is selected from the group consisting of TMR-maleimide, TMR-iodoacetamide and Alexafluor-maleimide.

Claim 21 (withdrawn): The polynucleotide of claim 19, further comprising a probe hybridized thereto.

Claim 22 (withdrawn): The polynucleotide of claim 19, further comprising a probe hybridized thereto, said probe being attached to a microarray substrate.

Claim 23 (withdrawn): The polynucleotide of claim 19, wherein said polynucleotide is cRNA.

Claim 24 (withdrawn): A molecular probe, wherein said probe terminates in a moiety selected from the group consisting of a thio dideoxynucleotide and an thio acyclonucleotide.

Claim 25 (withdrawn): The probe of claim 24, wherein said probe is a nucleic acid probe.

Claim 26 (withdrawn): The probe of claim 24, wherein said probe is bound to a microarray substrate.

Claim 27 (withdrawn): The probe of claim 26, wherein said probe is a nucleic acid probe and is hybridized to a target nucleic acid.

Claim 28 (withdrawn): A microarray, comprising at least one molecular probe, said probe terminating in a moiety selected from the group consisting of a thio dideoxynucleotide and a thio acyclonucleotide.

Claim 29 (withdrawn): A nucleic acid, said nucleic acid comprising at least three residues of the group consisting of an adenosine thiophosphate residue, a deoxyadenosine thiophosphate residue, a cytidine thiophosphate residue, a deoxycytidine thiophosphate residue, a guanosine thiophosphate residue, a deoxyguanosine thiophosphate residue, a thymidine thiophosphate residue, and a uridine thiophosphate residue.

Claim 30 (withdrawn): The nucleic acid of claim 29, comprising at least four residues of the group consisting of an adenosine thiophosphate residue, a deoxyadenosine thiophosphate residue, a cytidine thiophosphate residue, a deoxycytidine thiophosphate residue, a guanosine thiophosphate residue, a deoxyguanosine thiophosphate residue, a thymidine thiophosphate residue, and a uridine thiophosphate residue.

Claim 31 (withdrawn): The nucleic acid of claim 29, comprising a labeling moiety conjugated to a thiophosphate moiety in at least one of said residues.

Claim 32 (withdrawn): A nucleic acid, comprising cRNA having a thiophosphate nucleotide.

Claim 33 (withdrawn): A cRNA comprising at least one residue selected from the group consisting of an adenosine thiophosphate residue, a cytidine thiophosphate residue, a guanosine thiophosphate residue, and an uridine thiophosphate residue.

Claim 34 (withdrawn): An expression assay kit, comprising a labeling reagent, and a nucleotide reagent, said labeling reagent comprising a thioreactive compound, and said nucleotide reagent comprising a nucleoside α-thiotriphosphate.

Claim 35 (withdrawn): The kit of claim 34, wherein said nucleotide reagent is at least one of the group consisting of adenosine α-thiotriphosphate, cytidine α-thiotriphosphate, guanosine α-thiotriphosphate, and uridine α-thiotriphosphate.

Claim 36 (withdrawn): The kit of claim 34, wherein said thioreactive compound is selected from the group consisting of a maleimide and an alkyl iodide.

Claim 37 (withdrawn): A single nucleotide polymorphism assay kit, comprising a labeling reagent, and a nucleoside triphosphate, said labeling reagent comprising a thioreactive compound, and said nucleoside triphosphate comprising a compound

selected from the group consisting of a dideoxynucleoside α-thiotriphosphate and an acyclonucleoside α-thiotriphosphate.

Claim 38 (withdrawn): A method of labeling a nucleic acid that terminates in a residue selected from the group consisting of a dideoxyadenosine thiophosphate residue, a dideoxyguanosine thiophosphate residue, a dideoxycytidine thiophosphate residue, a 3'-deoxythymine thiophosphate residue, and a dideoxyuridine thiophosphate residue, comprising reacting said nucleic acid with a thioreactive compound.

Claim 39 (withdrawn): A method of labeling a nucleic acid that terminates in a residue selected from the group consisting of an acycloadenosine thiophosphate residue, an acycloguanosine thiophosphate residue, an acyclocytidine thiophosphate residue, a 3'-acyclothymine thiophosphate residue, and an acyclouridine thiophosphate residue, comprising reacting said nucleic acid with a thioreactive compound.